CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/KRIDL/W.No.01/CSR.1/740a/CEMENT/2014-15

Date: 21.01.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
*AGENCY	:	**Technical Manager,** KRIDL, Bangalore.
*NAME OF THE WORK	:	Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	19.01.2015
PERIOD OF TESTING	:	19.01.2015 to 21.01.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
1	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	475 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Job No: CTCE/BBMP/KRIDL/W.No.01/CSR.1/740a/SAND Gradation/2014-15 : 21.01.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager,** KRIDL, Bangalore.
* Name of Work	: Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
Technical Reference	: IS : 2386 Part 1 - 1963 RA-2007
Sample ID	: Fine Aggregates
Sample Received on	: 19.01.2015
Date of Testing	: 21.01.2015

Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.77	90-100	90-100	90-100	95-100
2.36	83.29	60-95	75-100	85-100	95-100
1.18	61.66	30-70	55-90	75-100	90-100
600 Micron	28.72	15-34	35-59	60-79	80-100
300 Micron	10.05	5-20	8-30	12-40	15-50
150 Micron	7.19	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Civil Tech Consultants & Engineers Bangalore

Remarks : This sample is under Zone-I specific limits.

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T-2377

Job No: CTCE/BBMP/KRIDL/W.No.01/CSR.1/740a/AGG/GR/2014-15 : 21.01.2015

TEST REPORT ON COARSE AGGREGATES

* Customer	: Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: Technical Manager, KRIDL, Bangalore.
* Name of Work	: Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
Technical Reference	: IS : 2386 Part I -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 19.01.2015
Date of Testing	: 21.01.2015

Total Wt. of Aggregates in gms= 10000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.85	95-100	85-100
20	51.25	30-70	0-20
10	33.60	10-35	0-5
4.75	3.80	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No: CTCE/BBMP/KRIDL/WCNo.01/CSR.1/740a/AGG/GR/2014-15 : 21.01.2015

TEST REPORT ON COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Technical Manager,** KRIDL, Bangalore.
* Name of Work	: Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	: AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (20mm)
Sample Received on	: 19.01.2015
Date of Testing	: 21.01.2015

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS :383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	90.08	95-100	85-100
10	12.58	25-55	0-20
4.75	4.74	0-10	0-5

* Information is furnished by the Customer/Representative

Remarks : This sample is under Single Sized specific limits

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Job No.: CTCE/BBMP/KRIDL/WNo.01/STEEL/2014-15 23.01.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the work	:	Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
Date of Test	:	23.01.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	556	13.55	O.K	O.K

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Job No.: CTCE/BBMP/KRIDL/W.No.01/STEEL/2014-15 23.01.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the work	:	Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
Date of Test	:	23.01.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	515	558	13.70	O.K	O.K

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Job No.: CTCE/BBMP/KRIDL/W.No.01/STEEL/2014-15

23.01.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of the work	:	Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
Date of Test	:	23.01.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	16	1.58	520	563	13.95	O.K	O.K

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T-2377

Job No.: CTCE/BBMP/KRIDL/WC.No.01/CSR.1/740a/CUBE/2014-15 26.02.2015

TEST REPORT ON CONCRETE CUBES

* Client	: Asst. Executive Engineer, Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: Technical Manager, KRIDL, Bangalore.
* Name of the work	: Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Divison, BBMP, Bangalore.
* Reference	: AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
* Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{25}
Compressive Strength as o	: 28^{th} day
Sample Received on	: 29.01.2015

Sl No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	29.01.2015	26.02.2015	8.285	503.7	22.39
2	29.01.2015	26.02.2015	8.476	525.3	23.35
3	29.01.2015	26.02.2015	8.314	516.8	22.97

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Job No: CTCE/BBMP/KRIDL/WNo.01/Pre slab/2014-15

02.02.2015

PRE CAST SLAB(CORE) TEST REPORT

Name of Client	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Name of Agency	:	**Technical Manager,** KRIDL, Bangalore.
Name of work	:	Improvements to Roads and Construction of Drains at Maruthinagara surrounding areas in Ward No.01 of Yelahanka Sub Division, BBMP, Bangalore.
Referece	:	AEE/BBMP/YSD/AE-1/2014-15/313 Dated: 19.01.2015
No.of Sample Tested	:	03
Date of Testing	:	02.02.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Grade of Concrete	:	M_{15}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.396	2521.01	1.60	0.960	25.85	13.17	14.22	13.65	17.06
2	50.00	78.00	0.387	2526.89	1.56	0.955	25.30	12.89	13.92	13.29	16.61
3	50.00	82.00	0.408	2534.06	1.64	0.965	26.75	13.62	14.71	14.20	17.75

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